

REMARKS

Applicant has amended the claims 18 and 36 through 46. Applicant respectfully submits that these amendments to the claims are supported by the application as originally filed and do not contain any new matter (see original claim 10 and paragraphs [0012], [0028]-[0030], [0037] and [0040] of the corresponding patent publication and the Figures 1, 4 and 5). Accordingly, the Office Action will be discussed in terms of the claims as amended.

Firstly, Applicant would like to point out that the Examiner has indicated that the claims 18, 29, 31 through 34 and 37 through 46 contain allowable subject matter and could be put in condition for allowance. In addition, Applicant would like to point out that the claim 36 has been amended to include the allowable subject matter of claim 37, particularly the elements of the feeder unit.

The Examiner has rejected the claim 36 and 14 through 16 under 35 USC 103 as being obvious over Tada et al. in view of du Plessis and Dienst stating that Tada et al. discloses a material storage processing tank including a heating and drying chamber having at its lower end a discharge port and therein a thermo-conducting heating means and including a hopper chamber connected to the upper end of said heating and drying chamber for storing therein a powdered or granular material to be heated and dried and a decompression means for depressurizing the inside of said storage processing tank, wherein said thermo conductive heating means comprises an outer tube unit having a first heater provided in a tube wall and a plurality of fins for conducting the heat of said first heater projected from the inside of said side wall into the center and spaced in its circumferential direction, wherein the powdered or granular material stored in said material storage processing tank is heated and dried by thermo-conductive heating means in said heating and drying chamber while said material storage processing tank is depressurized and wherein the powdered or granular material stored in said hopper chamber is fed into said heating and drying chamber by gravitation accompanied by the discharge of the heated and dried powder or granular material from the discharge port, said thermal conductive heating means further comprising an inner tube unit having a pillar body hung at the center of said outer tube unit, a second heater embedded in said pillar body and a plurality of fins for conducting the heat of said second heater, said tube wall and said fins of said lower tube unit, and said pillar body and said fins of said inner tube

unit are all made of a highly heat conductive metal, wherein said pillar body has at its lower end a rectifier whose diameter is enlarged downwardly, wherein a carrier gas introduction means by which a carrier gas is introduced into said storage processing tank is further provided at said material storage processing tank; du Plessis teaches a large capacity hopper and fed by weight for heat and dried processing, each time the powdered or granular material is finished heat and dry processing in said heat and drying chamber is discharged through said discharge port for the purpose of providing increase production and reduce fabrication cost; Dienst teaches integrally connected and air tight for the purpose of facilitating the dry processing and reducing the footprint of the apparatus; and it would have been obvious to one of ordinary skill in the art to modify Tada et al. to have a larger capacity hopper and fed by its own weight for heat and dry processing and discharge through the discharge port as taught by du Plessis and to have integrally connected and air tight as taught by Dienst for the purpose of facilitating the drying processing and reducing the footprint of the apparatus.

In reply to this rejection, Applicant has carefully reviewed Tada et al., du Plessis and Dienst and respectfully submits that none of them disclose the construction of the feeder unit claimed by Applicant's claim 36. In particular, Applicant respectfully submits that none of the art cited by the Examiner discloses:

1. A feeder unit connected with a pneumatic transportation means provided at the discharge port of the drying and heating chamber;
2. A feeding unit connected with a transportation line and a circulation line both of which are diverged from a main line constituting the pneumatic transportation means;
3. A pneumatic transportation pipe provided corresponding to the transportation line for supplying the powdered or granular material discharged through the discharge port to a processing apparatus of powdered or granular material; and
4. A circulation pipe, provided corresponding to the circulation line, for supplying the powdered or granular material discharged through the discharge port to the upper part of the hopper chamber.

Still further, Applicant has carefully reviewed du Plessis and respectfully submits that du Plessis is designed to work with a particular powdered material, namely powdered carbon. By utilizing the powdered carbon the drying or heating is performed by electric resistance heating. Still further, the carbon is supplied into large hopper 3 and then fed past the graphite

blocks 8, 14 and 18 by gravity while being heated by the electric current flowing through the powdered carbon. In addition, the number of heating chambers provided below the chamber 3 is dictated by the amount of moisture in the carbon particles and the carbon particles are continuously dried as they pass through the chambers and are not completely dried until they pass through the last. Accordingly, Applicant respectfully submits that du Plessis does not disclose a material storage processing tank in the sense of Applicant's invention.

In view of the above, therefore, Applicant respectfully submits that the combination suggested by the Examiner is not Applicant's invention and the claims 36 and 14 through 16 are not obvious over Tada et al. in view of du Plessis and Dienst.

The Examiner has further rejected the claim 17 under 35 USC 103 as being obvious over Tada et al. in view of du Plessis and Dienst and further in view of Evans stating that the combination of Tada et al., du Plessis and Dienst discloses all of Applicant's invention except for a hopper chamber having an opening at its upper end and a open-close cover for air tightly closing the opening; Evans teaches a hopper chamber having an opening at its upper end and an open-close cover for air tightly closing the opening and wherein a powdered or granular material to be heated and dried is capable of being fed in said material storage processing tank by opening said open-close cover for the purpose of closing the apparatus; and it would have been obvious to modify the combination of Tada et al., du Plessis and Dienst in view of the teachings of Evans.

In reply to this rejection, Applicant would like to incorporate by reference his comments above concerning Applicant's invention, Tada et al., du Plessis and Dienst. In addition, Applicant has carefully reviewed Evans and respectfully submits that it too does not disclose the particular construction of the feeder unit of Applicant's invention. Still further, Applicant has carefully reviewed Evans and respectfully submits that the cover 14 need not be air tight and directs the Examiner's attention to column 2, lines 38-41 wherein it states:

"The material inlet means 14 could be any other conventional type, such as a manual loader cover".

In view of the above, therefore, Applicant respectfully submits that the combination suggested by the Examiner is not Applicant's invention as claimed by claim 17 and the claim 17 is not obvious over Tada et al. in view of du Plessis, Dienst and further in view of Evans.

In view of the above, therefore, Applicant respectfully requests that this Amendment

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be entered, favorably considered and the case passed to issue.

Please charge any additional costs incurred by or in order to implement this Amendment or required by any requests for extensions of time to QUINN EMANUEL DEPOSIT ACCOUNT NO. 50-4367.

Respectfully submitted,

By 

William L. Androlia

Reg. No. 27,177

Quinn Emanuel Urquhart Oliver & Hedges, LLP  
Koda/Androlia  
865 S. Figueroa Street, 10th Floor  
Los Angeles, California 90017  
Telephone: 213-443-3000  
Facsimile: 213-443-3100  
E-mail: thomasedison@quinnemanuel.com

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William L. Androlia

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